

What is claimed is:

1. A load support and transfer platform for use in moving objects off of a mobile, rectangular bed, the load support and transfer platform comprising:

first, second and third segments disposed end to end in alignment with an end of the rectangular bed, the first and second segments being articulated and the second and third segments being articulated;

an extension mechanism for moving the first, second and third segments as a unit partially off the rectangular bed by way of the end;

each of the first, second and third segments having an independently actuable conveyor forming an upper surface of its respective segment and operable to allow an object supported by one of the segments to be transferred to another segment or off one end of the load support and transfer platform; and

a positioning mechanism for vertically repositioning the first segment.

2. The load support and transfer platform as set forth in claim 1, further comprising:

a truck trailer providing the mobile bed.

3. The load support and transfer platform as set forth in claim 2, further comprising:

a controller for extending and retracting the first, second and third segments as a unit and for operating the conveyors to move a last in object to the first segment for deposition of the last in object on an external surface, the controller being responsive to inputs for moving all of a plurality of objects supported on the load support and transfer platform toward the first segment and cutting movement of the conveyor for the third member to separate the last in object from the remaining

objects while continuing to move the last in object toward the first segment.

4. The load support and transfer platform as set forth in claim 3, further comprising:

the first segment being a terminal member located closest to an openable end of the trailer when the load support and transfer platform is fully retracted;

the second segment being an intermediate member articulated between the first and third members; and

the third segment being a primary support member.

5. The load support and transfer platform as set forth in claim 4, further comprising:

the controller providing for retracting the first, second and third segments into the trailer while the conveyor for the first segment continues to move the last in object off the first segment at zero velocity relative to the ground.

6. The load support and transfer platform as set forth in claim 5, further comprising:

a trailer height adjustment mechanism.

7. Apparatus comprising:

a trailer;

a main conveyor section providing a support surface for cargo;

a mid conveyor section abutting the main conveyor section along an edge of each;

an end conveyor section abutting the mid conveyor section along an edge of the mid conveyor section opposite the edge abutting the main conveyor section;

a track installed on the trailer and supporting the main, mid and end conveyor sections in the trailer for horizontal movement within and out from the trailer;

the mid conveyor section and main conveyor section being articulated allowing the mid conveyor section to rotate through about ninety degrees downwardly from the main conveyor section when not supported by the track or a surface;

the end conveyor section and mid conveyor section being articulated allowing the end conveyor section to rotate through about ninety degrees to remain horizontal while the mid conveyor section is rotated on the main conveyor section; and

and each of the main, mid and end conveyor sections having a conveyor.

8. Apparatus as claimed in claim 7, further comprising:

a trailer suspension control system allowing the height of the truck to be adjusted.

9. Apparatus as claimed in claim 8, further comprising:

a controller for extending the main, mid and end conveyor sections from the trailer as a unit;  
and

the controller further providing, responsive to operator inputs, for adjusting the height of the truck and the articulation of the mid and end conveyor sections to place the end conveyor section on a target surface for unloading an object from the trailer.

10. Apparatus as claimed in claim 9, further comprising:

the controller providing for selecting from independent and coordinated movement of the conveyors on the main, mid and end conveyor sections for repositioning, modifying spacing between and off loading objects.

11. A trailer onboard handling system for discrete units of freight comprises:

a segmented, translatable platform;

a main segment of the translatable platform for supporting the discrete units during shipping;

a mid segment of the translatable platform attached for rotation on an axis provided by a first horizontal joint to the main segment;

an end segment of the translatable platform attached for rotation to the mid segment on a second horizontal joint parallel to the first horizontal joint;

a conveyor forming the principal upper surface of each of the segments;

the conveyors being aligned from segment to segment to allow cooperative movement, respacing and off loading of the discrete units on and between the segments and off of the end segment; and

a platform translation system for extending and retracting the translatable platform from an open end or side of the trailer.

12. A trailer onboard handling system as claimed in claim 11, further comprising:

a rotation system for the mid and end segments allowing the end segment to be lowered to and placed flat on an external target surface.

13. A trailer onboard handling system as claimed in claim 12, further comprising:

a trailer suspension system allowing the trailer to be raised and lowered.